

**ABSTRACT****METHOD FOR GENERATING SPARSE LOGICAL VOLUME MIRRORS  
WITHIN DATA STORAGE SYSTEMS**

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A method for generating sparse logical volume mirrors within data storage systems is disclosed. After one of the mirrored physical volumes within a mirrored physical volume configuration has been damaged, the damaged physical volume is replaced by a replacement physical volume. Then, each partition within a sparse logical volume associated with the mirrored physical volumes is interrogated. In response to a partition within the sparse logical volume being allocated, the partition is copied to the replacement physical volume. In response to a partition within the sparse logical volume not being allocated, the partition is not copied to the replacement physical volume.